

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): DeRudder et al.	
Application No.: 10/797,418	Group Art Unit: 1711
Filed: 3/10/2004	Examiner: Terressa Boykin
Title: Transparent and high-heat polycarbonate-polysiloxane copolymers and transparent blends with polycarbonate and a process for preparing same	Confirmation No: 4129
Attorney Docket No.: GEPL.P-054	
Customer No.: 43247	

DECLARATION UNDER RULE 132

The undersigned each hereby declare as follows:

1. I am a named inventors of the above-referenced application. I am familiar with the application including the claims thereof.
2. I am aware that the Examiner has issued and Office Action in which the assertion is made that the product made in accordance with the present invention would be the same as the product made using the method of European Patent No. 0 764 676 (the '676 reference').
3. Products made by the method of the present invention and products made in accordance with the '676 reference are not the same, and have distinct properties. Products made by the present method have very low levels of polydiorganosiloxane subunits that are directly coupled to another polydiorganosiloxane subunit. In contrast, the product of the '676 reference is a block copolymer in which there are blocks containing multiple polydiorganosiloxane subunits in sequence without intervening dihydroxy phenol subunits.

4. One practical consequence of this structural difference is in the optical properties of the resulting polymer. To demonstrate this difference, the following experiment was performed.
5. A 5 wt% siloxane copolymer (5D50) was prepared by the method of the '676 reference as follows. A reaction mixture of 22.8 g (0.1 mol) of BPA, 1.3 g (0.000325 mol) of d-50 eugenol capped siloxane, 1.2 g (0.0057 mol) of p-cumylphenol, 1.0 g of 75wt% MTBA, 150 uL of triethylamine, 210 mL of methylene chloride and 160 mL of water was stirred at pH 11-12 as 14.8 g (0.15 mol) of phosgene was added. The pH was maintained at 11-12 with 50 wt% aqueous sodium hydroxide. The polymer solution was separated from the brine and washed two times with 1 N HCl (aq) and three times with deionized water. The polymer was isolated by hot water crumbing in a blender and dried at 125°C. The Mw of the polymer by GPC using polystyrene standard was 34,600.
6. A film was prepared by hot pressing the powder as prepared above at 225°C. A film of 5D50 prepared by the method described in our patent was also prepared by pressing at 225°C. Both films were 10 mils thick. The haze of each film was measured on a BYK Gardner Haze-Guard Plus hazemeter. The haze for the copolymer prepared by the method of the '676 reference averaged 20.4 (5 measurements). The haze for the copolymer prepared by our invention averaged 1.3 (5 measurements).
7. To place these numbers in context, compression molded plaques with a thickness of films 100 mil were prepared from each of the two materials. These plaques were placed on a business card over a part of the text and the attached photograph was taken. The film in accordance with the invention is on the right. Print is readily visible and readable through this film. In contrast, the film made in accordance with the '676 reference is on the left. In this case, the film obscures the text, even though the film is thin. A thicker material would be completely opaque.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

dated: November 27, 2006

dated: November 21, 2006

dated: _____

dated: November 21, 2006

dated: _____

dated: _____

James DeRudder
James DeRudder

Niles Rosenquist
Niles Rosenquist

Gary Davis
Matthew Pixton
Matthew Pixton

Mark Nelson

Zhaohui Su

THE
C
O
M
P
A
N
Y
T
H
E
C
O
M
P
A
N
Y

THE
C
O
M
P
A
N
Y
T
H
E
C
O
M
P
A
N
Y

THE
C
O
M
P
A
N
Y
T
H
E
C
O
M
P
A
N
Y

THE
C
O
M
P
A
N
Y
T
H
E
C
O
M
P
A
N
Y